

**CARDIAC RHYTHM MANAGEMENT SYSTEM SYNCHRONIZING  
ATRIAL SHOCK TO VENTRICULAR DEPOLARIZATION BASED ON  
SENSING REFRACTORY**

**Abstract**

A cardiac rhythm management system synchronizes the delivery of an atrial defibrillation shock to a ventricular depolarization concluding a present RR interval since the occurrence of the last ventricular depolarization. The present RR interval 5 is deemed "shockable" if, among other things, its ventricular refractory period (VRP), which may be extended by ventricular "noise" occurring during the VRP, is less than a predetermined value, which may be different depending on whether the VRP is initiated by a paced or sensed ventricular depolarization. Alternatively, the present RR interval is deemed shockable if a post-VRP time period before the 10 ventricular depolarization concluding the present RR interval exceeds a predetermined value. In conjunction with one or both of these conditions, other requirements for deeming a present RR interval shockable include comparing the present RR interval duration to a predetermined value, or to a preceding RR or QT interval.

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